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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/015,804

12/17/2001

Nobuyuki Takahashi

001425-121

7371

7590

04/09/2003

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EXAMINER

MOORE, KARLA A

ART UNIT

PAPER NUMBER

1763

DATE MAILED: 04/09/2003

4

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/015,804

Applicant(s)

TAKAHASHI, NOBUYUKI

Examiner

Karla Moore

Art Unit

1763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,738,767 to Coad et al. in view of U.S. Patent No. 4,651,674 to Hayashi et al.

3. Coad et al. disclose a substrate processing device in Figures 1-3 substantially as claimed and comprising: a plurality of vacuum process chambers (10, 12, 14, 16, 18, 20), each of which administers a prescribed process to a substrate therein; a through-chamber (24) which constitutes a vacuum chamber, the plurality of vacuum process chambers are hermetically-connected to a perimeter of the through-chamber (via gate valves 50, 52, 54, 56, 58, 60); a carry system which carries a substrate in sequence, via the through-chamber, to a plurality of vacuum process chambers, the carry system comprises a substrate holder (64, 66) which holds the substrate upright; and a horizontal movement mechanism (110, 112) which moves the substrate holder via the through-chamber to the plurality of vacuum chambers.

4. With respect to claims 2 and 3, 6-10 and 11-12, the through-chamber further constitutes a direction altering chamber comprising a direction altering mechanism (70) which alters the direction of movement of the substrate holder using the horizontal movement mechanism, wherein the direction-altering mechanism alters the direction of movement by rotating the substrate holder and the horizontal movement mechanism about a vertical rotating axis (72). The vertical rotating axis is coincident with a center axis of the direction-altering chamber.

5. With respect to claims 6-10, which further recite a substrate processing device comprising a plurality of through-chambers, the courts have ruled that the mere duplication of parts has no patentable significance unless a new and unexpected result is produced. In re Harza, 274 F. 2d 669, 124 USPQ 378 (CCPA 1960). In this case, additional chambers would obviously increase throughput.

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6. However, Coad et al. fail to teach the substrate holder holding two substrates in such a way that a plate surface thereof forms an angle to the horizontal between 60 and 90 degrees.

7. Hayashi et al. teach the use of substrate holder for supporting two substrates at an angle of between 60 and 90 degrees to the horizontal for the purpose of supporting the substrates on a susceptor in a small area, thus achieving a compact apparatus (column 2, rows 20).

8. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a susceptor for supporting two substrates at an angle of between 60 and 90 degrees to the horizontal in Coad et al. in order to support substrates on a susceptor in a small area, thus achieving a compact apparatus. Additionally, it would be obvious to support two substrates simultaneously on the substrate holder in Coad et al. in order to increase the throughput of the apparatus as illustrated in Hayashi et al.

Conclusion

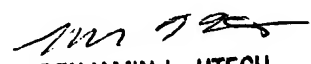
9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karla Moore whose telephone number is 703.305.3142. The examiner can normally be reached on Monday-Friday, 8:30am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Mills can be reached on 703.308.1633. The fax phone numbers for the organization where this application or proceeding is assigned are 703.872.9310 for regular communications and 703.872.9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.308.0661.

km
April 6, 2003


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